



QT-F950

2/22/12

TITLE: TENNEY TEST DEPARTMENT DATA FORM

JOB # 128082 MODEL C30S CUSTOMER MBARI OPERATOR NWP/CHG

	BY	DATE
BASE	<u>NWP</u>	<u>2/1/12</u>
READY FOR ELECTRICAL		
READY FOR MECHANICAL TEST		
ALL OPTIONS PRESENT		
PRODUCTION SIGN OFF COMPLETE		

COMPRESSORS	MAKE	MODEL	SERIAL NUMBER
R-507	BITZER	2FES-2-2EU	<u>2593136896</u>

AS-BUILT ELECTRICAL DRAWINGS					
DWG	1C803S1	1 OF 2	REV <u>I</u>	DWG	REV
DWG	1C803S1	2 OF 2	REV <u>M</u>	DWG	REV
DWG	1C807S1		REV <u>J</u>	DWG	REV

AS-BUILT REFRIGERATION SCHEMATIC					
DWG	R-CEVO-2S		REV <u>P</u>	DWG	REV

SPECIAL PRINTS, DWGS, SCHEMATICS					
TYPE				DWG	REV
TYPE				DWG	REV
TYPE				DWG	REV
TYPE				DWG	REV

REFRIGERATION SYSTEM PREPERATION		
1. LEAK TEST WITH ELECTRONIC LEAK DETECTOR	BY <u>Shop</u>	DATE <u>2/1/12</u>
2. CHECK COMPRESSOR OIL LEVELS	<u>CHG</u>	<u>2/1/12</u>
3. INSTALL DRYERS WHERE APPLICABLE	<u>N/A</u>	<u>N/A</u>
4. NOTE EVACUATION LEVEL: HIGH STAGE <u>10</u> MICRONS	LOW STAGE MICRONS <u>N/A</u> MICRONS	
5. SYSTEM CHARGE:		
HIGH STAGE: R-507 : <u>5.4</u> LBS.		
LOW STAGE: R- <u>N/A</u> : <u>N/A</u> LBS.		
STATIC PRESSURE: <u>N/A</u> PSIG AT <u>N/A</u> C		
ADDITVE TYPE: <u>N/A</u> AMOUNT <u>N/A</u> cc.		

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1. INSTALL SENSORS CHG
2. CHECK WATER LEVEL IN HUMIDIFIER. ADJUST AS NEEDED. N/A
3. CHECK CONTROL AND POWER CIRCUITS. ENERGIZE CHG
AND CHECK OPERATION.
- A. LINE VOLTAGE 208 V 1 PH 60 HZ
MAX CURRENT 32 AMPS, FUSE FOR 40 AMPS
- B. SPECIAL RATIO TRANSFORMERS (ACTUAL)

	#1	#2	#3	#4
INPUTS	210.4	122.0	-	-
OUTPUTS	122.0	24 VDC	-	-

- C. CONDITIONER FAN CURRENT
- D. CONDENSER FAN CURRENT
- E. HIGH STAGE CURRENT
- F. LOW STAGE CURRENT
- G. CONTROL HEAT CURRENT
- H. HUMIDIFIER CURRENT
- I. BOOST HEAT CURRENT
- J. VACUUM PUMP CURRENT
- K. BRINE PUMP CURRENT

1.4	A	-
1.3	A	- A
9.9	A	-
		-
15.1	A	-
		-
~	A	-
		-
		-

Window Heat 3.1A
Door frame Heat 1.2A

4. CHECK FAN ROTATION (CCW), VIEWED FROM FAN END NWP
5. CHECK REMOTE SET POINT OPERATION (RS485). CHG
6. LABEL SOLENOID VALVES. N/A
7. ALTITUDE: CHECK VACUUM PUMP OIL LEVEL BEFORE PROCEEDING.-
A. EVACUATE TO 50,000 FT. AND RATED ALT. WITHIN 15 AND 35 MIN. RESPECTIVELY.
NOTE TIME TO 50,000 FT. : N/A MINS. * N/A FT. IN N/A MINS.
* STANDARD 100,000 FT. SEE SPEC. SHEET FOR RATED ALT. OPTION
CONTROL AT RATED ALTITUDE FOR 60 MINS. N/A
B. LEAK TEST: 1. PUMPDOWN TO ULTIMATE N/A MM HG. TURN PUMP OFF.
2. NOTE 1 HOUR LEAK RATE TO N/A MM HG.
8. A. STD. TEMP-HUM.: RUN CHAMBER PER TEST SHEET AND MAKE NECESSARY CHG
ADJUSTMENTS.
B. SPECIALS: RUN ANY CUSTOMER REQUIRED TESTS
AND DOCUMENT RESULTS. N/A
9. SET AND RECORD ALL REFRIGERATION PRESSURE SWITCHES. NWP

10. Tighten all packing nuts & flair nuts NWP

SYSTEM	FUNCTION	CUT-IN	CUT-OUT
1APS-HI	HPCO	N/A	300 PSIG
1BPS-LO	LPCO	N/A	15" HG

11. Front seat pressure taps and liq
line charging valve. N/A

TITLE: PERFORMANCE TEST FOR C30S / C30RS
REV. A

DATE: 7/16/12

(RATED CONTROL TOLERANCE +/-1.0°C)

JOB # 128082 PENETRATIONS: 3-3" PORTS, 1-11"X16.5" WINDOW

NOTE: THE ADDITION OF EXTRA PORTS OR ANY OTHER EQUIPMENT WILL AFFECT THE PULL-DOWN RATE.

1. Cycle chamber at 180°C for 30 minutes.
2. Pull down to -20°C within 76 minutes, see note. Reached -20 in 76 minutes.
Reached -35 CHG
3. Actuate chamber low limits-note set point actuation:
Set at -35°C Acted at -35°C
4. Operate at -35°C for 60 minutes. Control +/- 1.0 C
5. Operate at 2°C for 60 minutes. Control +/- 1.0 C
6. Operate at 25°C for 60 minutes. Control +/- 1.0 C
7. Heat up to 180°C
180°C within 46 minutes. Reached in 46 Minutes
8. Stabilize at 180°C for 60 minutes. Control +/- 1.0 C
9. Actuate chamber high limits-note set point actuation:
Set at 180°C Acted at 180°C
10. Enter OC (FULL CLG); When 65°C is reached enter 65°C. Cycle for one hour.
Control +/- 1.0 C.
11. Run RH Tests in the following order:

TEMP	%RH	CONTROL TEMP	TOLERANCE+/- RH	HUMIDITY VENT PORT
25	50	+/- <u>N/A</u>	+/- <u>N/A</u>	OPEN
25	94	+/- <u>N/A</u>	+/- <u>N/A</u>	OPEN
85	94	+/- <u>N/A</u>	+/- <u>N/A</u>	OPEN
IF AIR DRYER IS INSTALLED RUN: Towers switching <u>N/A</u> . Solenoid controlling <u>N/A</u>				

12. Temperature Program: Standard X Special N/A
13. Humidity Program: Standard N/A Special N/A
14. Other Program: N/A

TEST COMPLETED BY: CHG DATE: 2/5/18

ALARM CHECK

C30S	
Mac Address	00:05:4B:03:AD:D0
Serial Number	101200005128
TPS License Code	175

EVENTS / OPTIONS AVAILABLE----	
Option: Boost Heat	FALSE
Option: Boost Cool	FALSE
Option: GN2 / Dry Air Purge	FALSE
Event 5	FALSE
Event 6	FALSE

PID DEFAULT VALUES	
Ch1 Heat Proportional Band	10
Ch1 Heat Proportional Gain	4000
Ch1 Heat Reset	78
Ch1 Heat Rate	0
Ch1 Heat Output Time	1
Ch1 Cool Proportional Band	10
Ch1 Cool Proportional Gain	3250
Ch1 Cool Reset	120
Ch1 Cool Rate	0
Ch1 Cool Output Time	7
Ch2 Heat Proportional Band	30
Ch2 Heat Proportional Gain	0
Ch2 Heat Reset	16.1
Ch2 Heat Rate	0
Ch2 Heat Output TIME	5
Ch2 Cool Proportional Band	30
Ch2 Cool Proportional Gain	0
Ch2 Cool Reset	60
Ch2 Cool Rate	0
Ch2 Cool Output TIME	7

RETRANSMIT DEFAULT VALUES	
Retransmit 1: Min	-100
Retransmit 1: Max	200
Retransmit 2: Min	0
Retransmit 2: Max	100
L3	20
L4	80
L6	20
L7	10
L8	80
L9	50
L11	10

L12	20
L14	0
L15	0

CHANNEL 1 SETUP	
Ch1-Raw Low	0
Ch1-Raw High	4095
Ch1-Scaled Low	-100
Ch1-Scaled High	300
Ch1-Scaled Offset	0
Ch1-PV MIN	-50
Ch1-PV MAX	200

CHANNEL 2 SETUP	
Ch2-Raw Low	0
Ch2-Raw High	2047
Ch2-Scaled Low	0
Ch2-Scaled High	100
Ch2-Scaled Offset	0
Ch2-PV MIN	0
Ch2-PV MAX	100

ALARM CONFIG	
Ch1 High Alarm SP	184
Ch1 Low Alarm SP	-39
Ch1 Deviation Low Alarm SP	0
Ch1 Deviation High Alarm SP	0
Ch2 High Alarm SP	104
Ch2 Low Alarm SP	0
Ch2 Deviation Low Alarm SP	0
Ch2 Deviation High Alarm SP	0

UNITS OF MEASURE	
Ch1 Units	0
Ch2 Units	0

READONLY VALUES	
TPS PLC software version	C 20171002

SPECIAL OPTIONS	
Read Humidity (PV only)	C 20171002

